1969

ONTARIO. DEPT. OF TREASURY AND ECONOMICS.

COMMENTARY ON THE MADIGAN-HYLAND REPORT ON THE KINGSTON-CAPE VINCENT INTERNATIONAL BRIDGE CROSSING.

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Economic Planning Branch
Department of Treasury and Economics

April, 1969

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The most significant fault of the above report lies in the approach that the Authority's consultants have taken to the investment decision. The question at hand is simply whether or not the public investment in a second St. Lawrence crossing in the Kingston area is an economically supportable investment.

The major emphasis of the above report contrasts strongly with that of the Interdepartmental Task Force. The consultants report seeks to determine the toll structure that will generate enough revenue to fully cover the cost of the proposed bridge; the approach used is basically that of a private firm seeking to maximize its profit given a certain level of investment. The report of the Interdepartmental Task Force questions the contribution of the incremental level of investment. The goals of the two reports are as follows:

1) Thousand Islands Bridge Authority - to show that a level of revenues sufficient to cover the costs of both bridges can be collected from users. The important factor here is the aggregate level of revenues and the aggregate level of costs.

2) The Interdepartmental Task Force - to examine the economic contribution of the marginal level of investment both in terms of its revenue generation and its contribution to its hinterland.

Under the proposals of the Authority the revenue yield from both bridges would be pooled and the joint revenues would be used to defray any

corporate expenses. What in fact would happen would be that the existing bridge facility, with its low capital charges (i.e., debt retirement in 1980) would subsidize the proposed facility.

It is clear from an examination of the revenue yield from the proposed bridge (i.e., $2,144,000 annual 1990) that this facility could not support itself. The Authority plans to divert part of the revenue collected on the existing facility to cover the shortfall on revenues of the proposed bridge. It is also interesting to note that under the present toll structure the combined revenues of both bridges would not be sufficient to fully recover the costs of both facilities and therefore an increase in toll charges for both crossings is proposed.

In order to fully appreciate the impact of such proposals the characteristics of the Authority's approach to this investment decision should be understood. The Authority's approach is basically that of a private corporation seeking to maximize its revenues from a <u>given level of investment</u>. It functions in a monopolistic environment whereby it controls movement across the St. Lawrence River. Within a given spatial hinterland there is no other convenient method of crossing the river. In addition as explained in the consultants report, the traffic characteristics of the present bridge facility are

1) long distance traffic
2) largely recreation-oriented trips
3) highly seasonal in nature.

The consultants report stresses that these travellers are not sensitive to time delays and moderate increases in distance. The demand characteristics of the bridge traffic are

(a) a highly inelastic demand where

(b) the bridge toll is a minor portion of the total trip cost.

It is these characteristics that allow the Authority to engage in demand pricing techniques where because of its monopoly position it can financially justify major increases in investment.

It is the position of the Interdepartmental Task Force that the investment decision should be justified on a marginal basis where each unit of added investment increases the economic benefit. This analysis demands an answer to questions such as:

1) can the proposed bridge provide sufficient economic benefits as well as financial revenues to support its debt structure without cross-subsidization from an existing facility?

2) if the existing bridge was to retire its debt in 1980 and maintain a toll structure just sufficient to meet its maintenance and operating costs what benefits would accrue to the hinterland and to the users?

3) while it may be possible because of the nature of the traffic demand and the monopolistic character of the Authority to price these services such that added investment can be recovered from the users, is this capacity justified on economic terms?

As has been stated, the approach applied to this analysis by the Authority is that "demand pricing" will elicit enough revenues to support a substantial amount of added capacity. The question not answered by the Authority is whether or not this capacity is required by the public

to satisfy the demand. The consultants report did not deal with this subject at all.

It should be recognized that the Province of Ontario has through its highway taxation pursued a cost pricing mechanism to defray the expenses of road projects. That is, the Province seeks to apportion the expenditure on roads among the users on the basis of the cost of service and not on the basis of what the traffic will bear.

In assessing the need for additional capacity the Authority's consultants make two statements that are somewhat misleading; these are:

> "By providing convenient access from the U.S. to an important region of Ontario extending from Kingston to the west and north, it will be an important stimulus to <u>both industrial</u> growth and recreational development in the area. <u>Lack of direct access presently impedes realization of the full potential of this region</u>".

Later in the report the consultants show that there will be very little industrial growth due to the increase in bridge capacity and secondly the consultants suggest that the present capacity has been restrictive in providing access to the hinterlands. If one considers that the Ivy Lea Bridge is just 24 miles or approximately one-half hour distance from Kingston, the site of the proposed bridge, then the above statement appears inconsistent with that below.

> "It must be fully realized in this case that the usual evaluation of time and distance advantage do not apply for the vast majority of users. With three-quarters of all passenger cars on the Thousand Islands Bridge engaged in recreation travel, most drivers will not be influenced by the opportunity to save miles or time".

It would appear that the present capacity and routing do not present any impediment to traffic, and therefore the only justification for additional capacity would be that such new capacity would attract a sufficient new

traffic to justify the expenditure. That is, the marginal increment of investment should be able to return at least its cost in the form of benefits or it is not justifiable.

Additional Areas of Disagreement

In addition to the above basic areas of disagreement with the Authority's consultants there are a number of assumptions, statements and propositions put forth in this report with which there is considerable disagreement. These are as follows:

(A) In order to support the traffic forecasts outlined in the report, the consultants suggest that a number of major public investments would have to be made. None of these costs were included in the costs of the proposed bridge. These investments are:

1) a direct connection with Highway 401 via Highway 38 which would be upgraded to a "modern divided highway with major grade crossings eliminated...",

2) improved access to downtown Kingston, and

3) a major interchange connection between Highway NY 12E and Interstate 81 with an improvement to the two lane Route 12. The cost of these improvements should be included in any feasibility study of the proposed bridge.

(B) The consultants suggest that the reduction of 24 miles in the trip distance to U.S.A. east coast points will divert substantial portions of traffic from the major metropolitan area of Toronto, that presently travel via the New York Freeway,

to utilize the proposed bridge. This contention is somewhat suspicious for three reasons.

i) the characteristics of this traffic are, by the consultants statement, such that they are not influenced by minor changes in either distance or time;

ii) the consultants advocate an increase in toll charges via the Kingston route which would certainly offset some of the advantages that they claim because of less tolls than the New York Freeway. More important, the advent of the proposed bridge eliminates the possibility of a toll free access route to Northeastern U.S.A. after 1980. This latter possibility could be of significant attractiveness for Toronto residents if sufficiently publicized;

iii) the advent of an additional facility crossing the St. Lawrence will not alleviate the pressures to construct major expressway improvements in southwestern Ontario. These facilities, i.e., Q.E.W. - Highway 27, Highway 401 etc. are basically demanded for commuter traffic and thus the off-peak tourist traffic does not add to the need for highway capacity.

(C) As the Interdpeartmental Task Force suggested the advent of the proposed bridge will not add significantly to the total number of tourists in the region as this class of traffic is not responsive to minor changes in the mobility patterns. This is not in accordance with the consultant's statement on page 7a of their report.

The characteristics shown for the majority of bridge traffic indicates that over 50 per cent of the trips are 200 miles or more and therefore it is unlikely that a 24 mile reduction will have any significant effect in generating new traffic.

It would appear that local traffic (32 per cent of the total is derived from the Kingston area, nine per cent of the total from

local U.S.A. points) would be affected by the increases in toll charges proposed for both bridges. A substantial increase in toll charges will certainly affect the day trips generated in the local area. It is expected that the diversion factors quoted in the consultant's report (that 15 to 87 per cent increases in toll charges elicited only two to 12 per cent decrease in revenues) do not represent a situation comparable with the Thousand Islands Bridge. Most toll bridges are characterized by a high degree of commuter traffic which is fairly captive to the bridge, however, this is not the case with the St. Lawrence crossings, particularly the local day trip crossings. This factor takes on even more relevance when the competing sites for recreational pursuits are taken into consideration.

(D) The report of Madigan-Hyland suggests that approximately 300,000 trips will be generated annually in 1990 from residents of Wolfe Island. The consultants anticipated a residential population of approximately 4,000 persons and a farm population of 900 persons in 1990. It is the contention of the Interdepartmental Task Force that such trips should not be included in any justification of the proposed bridge as it involves circuitous reasoning to suggest that the bridge justifies the residential development and further that the residential development justifies the construction of the bridge. The consultants acknowledge the validity of this proposition when, on

page C-4, they state, "since the primary impetus for Wolfe Island development will be the bridge, it is not reasonable to expect any serious, commitment to projects on the Island until the bridge becomes a certainty", and further on page C-5, "since substantial areas for home building exist within the Kingston urbanized area and steps are being taken to develop them, the impetus to locate homes on Wolfe Island does not come from a great scarcity of land".

It is doubtful, in light of the above, that any substantial development would take place on Wolfe Island. This is particularly so when it is recognized that virtually all water, sewage, hydro and fuel supplies are lacking and would have to be installed prior to development. These costs, in addition to the toll charges will serve to make the island a somewhat less attractive residential site.

(E) The consultants report claims that 165,000 trips will be generated annually by the existence of three new tourist attractions within the environs of the bridge; namely

(a) Frontenac Provincial Park

(b) Charleston Lake Park

(c) Rideau River Park.

The argument presented by the consultants is that the capacity of these parks represents a fixed relationship to the number of campsite facilities in Algonquin Park and that in 1968 Algonquin Park was visited by 633,000 visitors. The ratio of campsites to visitors was then used to forecast the new traffic expected for

the new facilities. It would appear that this forecast has over-estimated the drawing power of such attractions.

i) It is highly likely that the new facilities will divert some users away from Algonquin and therefore all of the U.S. visitors to these parks will not represent new traffic, but rather significant amounts will simply represent a new destination for previous bridge users.

ii) As reported in the Interdepartmental Task Force's report, "people will continue to go in the direction that habit established in the first place". It should be evident that capacity does not supply its own demand and the simple fact of building tourist facilities will not necessarily attract large numbers of new tourists.

iii) It is suggested that there is some over-statement of the traffic forecasted as many of the visitors to one park e.g., Frontenac Park will also visit Charleston Lake Park and Algonquin Park. Thus a U.S. visitor to each park does not represent three separate bridge crossings. In addition, it is probable that due to increasing vacation periods for most employees, the U.S. visitors will spend longer periods of time in these parks and campsites and therefore the increase in capacity will provide for longer stays but not necessarily more visitors. Thus the use of park capacity alone to forecast future bridge traffic would tend to overstate such crossings.

(F) <u>Additional Touring Trips</u>:

The consultants suggest in their report that 100,000 trips per annum (1990) will be generated by tourists who "will be curious enough to make a side trip to see the new bridge and the territory it makes accessible ...." also, "the increase in travel will by no means be confined to U.S. residents, as many Canadian travellers will find the new crossing a convenient routing for vacation trips or <u>for exploring new territory</u>". The report seems to indicate that the area to be made accessible

by the new bridge is now isolated. This is not true except for only a very limited area in Upperstate New York and Wolfe Island, however even these areas are not without access, although admittedly somewhat limited. It should be pointed out that the area immediately adjacent to the proposed bridge does not have the same quality of attraction that is available to tourists in the Thousand Island Bridge area and a number of other competing sites

(G) Industry and Commerce:

Trips forecast to be generated from the industrial and commercial employment in the Kingston area is 67,000 trips. These trips are classified as shopping, recreation and personal visiting trips. It should be expected that these trips will be much more responsive to toll increase than the longer vacation trips and therefore the increase in toll charges will continue to make Toronto, Ottawa and Montreal much more attractive shopping areas. These latter areas gain in appeal due to the existence of the International Border and the present unfavourable Canadian/U.S. dollar exchange rate.

It may be anticipated, in the initial period after such a proposed bridge was opened, that a large number of trips might be expected from both of the above categories, however because of the limited tourist attraction and the limited shopping potential it is expected that these trips would drop off sharply after the first few seasons.

(H) General Traffic Forecasts:

The general traffic forecasts for the Authority's facilities were

produced for the years 1980 and 1990 using a fixed relationship between population, motor vehicle registrations and motor vehicle mileage. The consultants have projected the population, motor vehicle registrations and the miles travelled for tributary areas to the Thousand Islands Bridge; these forecasts were then weighted according to the volume of traffic originating in each area. The assumption behind the use of these forecasts is that the number of vehicles crossing the Thousand Islands and Kingston Bridges will vary in direct proportion to the increase in the above three factors. That is, if the composite growth index as measured in the above terms increases by 200 per cent, it is assumed that all factors influencing the mobility patterns of this population will increase in direct proportion to this index. While the total mileage travelled by all motor vehicles may vary directly with population and automobile ownership, it is not certain that the utilization of any specific facility will vary in such direct proportions.

These forecasts are difficult to assess, however, it is our estimation that the utilization of these facilities, i.e., bridges, will increase at some rate less than the rate of population and automobile registration increase. If this is so then the estimates presented are overstated.

Regardless of the accuracy of such figures it should be understood that the proposed bridge will not open new territory but simply provide marginal improvements in the level of access to the hinterland.

Date Due